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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Joerg Kaufmann et al.  
Application No. : 09/758,575  
Filed : January 9, 2001  
For : GENES DIFFERENTIALLY EXPRESSED IN BREAST CANCER

Examiner :  
Art Unit : 1645  
Docket No. : PP-01656.002 / 200130.517  
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Commissioner for Patents  
Washington, DC 20231

FILING FORMAL DRAWINGS

Commissioner for Patents:

Enclosed are 14 sheets of formal drawings, Figures 1-12B, for filing in the above-identified application.

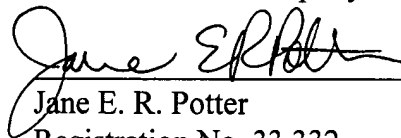


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PATENT TRADEMARK OFFICE

Respectfully submitted,

Seed Intellectual Property Law Group PLLC

  
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Registration No. 33,332

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Inventor(s): Joerg Kaufmann et al. Serial No. 09/758,575 Docket No. 200130.517

SEQ ID NO:1

CCGCGAGGTGCGCGGTCTCTTTAAGCGGGTCTGGTGGTTTCTGTTTCTGAAGGAAGTGACGGGGGTGGGATTGAATGAAAAGTGCAAAA  
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AAGGCAAGAGATGGGGTGGAGATTGGAACCCGCTTCAGATCTGGGCTCGGCTACTTACCTGCTGTGCAGCCATGGGTCAAGTGTCTGACCT  
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*Fig. 1*

SEQ ID NO:2

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*Fig. 2*

SEQ ID NO:3

MRLPGVPLARPALLLLPLLAPLLG TGAPA

*Fig. 3*

	10	20	30	40	50	60	70	80	90
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	GGCGCTCCACGCGCCAGAGAAATTCGCCAGGACCACCAAGACAAAGGACTTCTTCACTGCCCCACCTTAACTTACTTTTCACGT								
	100	110	120	130	140	150	160	170	180
	AAACACAGGCTCGCAGCGCTGGAGCCCGGGGCGCGGAGCGGGCCGGGCGAGCGGTCTCGCGCTCGGGGCGCGGGGGCGCCCTGC								
	TTTGTGTCGAGCGTCCGACCTCGGGCCCGGGCGCTCGGCCCGGCCCGTCCGGCGAGAGCGGAGCCCCGGCGGGCCCCGCGGGACG								
	190	200	210	220	230	240	250	260	270
	TGAGCGCTACCCAGCTGCGTCCGCGCCACTCGGGGCGACCCCGCGGCCAAGGCCCGCGGAGCGGCTCCGGGGCGCCCCGAAC TAG								
	ACTCGCATGGGTGACACGAGGCGCGGTGGAGCGCCCGCTGGGGCGCGGTTTCGGGGGCGGCTCGCCGAGGGCCCGGGGGCTTGATC								

280 290 300 310 320 330 340 350 360  
CCCCAACTTTGGGCGAAGTTTGCTGCGCTCTCCCGCCCCACGCGCGCGCGGGGCGGGAGCGGACGGGCCCCGGGGATGCG  
GGGGGTTGAAACCGCTTCAACGGACGGAGAGGGGCGGGGGTGCGCGCGGGGCCCGCGCCTGCGTCGCGGGGGGCCCTACGC

SEQ ID NO:2 M R>  
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GGAAGGGCCCCATGGGGACCGCGGGACGCGACGACGACGACGCGCGACGAGCGCGGCGACGACCCCTGCCACGCGGGCGGCTCGA  
L P G V P L A R P A L L L L L P L L A P L L G T G A P A E L >

TRANSLATION OF OAFHUMAN [A] &gt;

460 470 480 490 500 510 520 530 540  
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CGCCAGGCGCAGCGGACGGCTGCCGTTCCACTGGCTCCTCTCGGACGTCCGCTGTGCTGCGCTGTGCTAGTGGAGAGCTCGACGC  
R V R V R L P D G Q V T E E S L Q A D S D A D S I S L E L R>

TRANSLATION OF OAFHUMAN [A] &gt;

550 560 570 580 590 600 610 620 630  
CAAGCCCGACGGCACCCCTCGTCTCCTTACCAGCGCAGCTTCAAGAAGGATGTGAAGGCTCTCCGGGCGCTGATCCTGGGGAGCTGGAGAA  
GTTCCGGGCTGCCGTGGGAGCAGAGGAAGTGGCGGCTGAAGTCTTCTTCTACACTTCCAGAAGGCCCGGGACTAGGACCCCTCGACCTCTT  
K P D G T L V S F T A D F K K D V K V F R A L I L G E L E K>

TRANSLATION OF OAFHUMAN [A] &gt;

640 650 660 670 680 690 700 710 720  
GGGGCAGAGCTCAGTTCCAGGCCCTCTGCTTTGTCACCAGCTGCAGCAACAATGAGATCATCCCAGTGAGGCCATGGCCAAAGCTCCGGCA  
CCCCGTCTCAGTCAAGGTCGGGAGAGCAAAAGTGGGTCGACGTCGTGTTACTCTAGTAGGGGTCACTCCGGTACCGGTTTCAGAGCGCGT  
G Q S Q F Q A L C F V T Q L O H N E I I P S E A M A K L R Q

TRANSLATION OF OAFHUMAN [A] &gt;

*Fig. 4A*

```

      730      740      750      760      770      780      790      800      810
GAAAAATCCCGGGCAGTGC CGCAGGCGGAGGAGTTCCGGGTCTGGAGCATCTGCACATGGATGTCGCTGTCAACTTCAGCCAGGGGGC
CTTTTATGGGGCCCGTCA GCGCGTCCGCTCTCTCAAGCCCCAGACCTCGTAGAGGTGACCTACAGCGACAGTTGAAGTCGGTCCCGCG
  K N P R A V R Q A E E V R G L E H L H M D V A V N F S Q G A >
      _____TRANSLATION OF OAFHUMAN [A]_____>

      820      830      840      850      860      870      880      890      900
CCTGCTGAGCCCCCATCTCCACAAGTGTGTGCCGAGGCGGTGGATGCCATCTACACCGCCAGGAGGATGTCGGTTCTGGCTGGAGCA
GGACGACTCGGGGTAGAGGTGTGCACACAGGCTCCGGCACCTACGGTAGATGTGGGCGGTCTCTACAGGCCAAGACCGACCTCGT
  L L S P H L H N V C A E A V D A I Y T R Q E D V R F W L E Q >
      _____TRANSLATION OF OAFHUMAN [A]_____>

      910      920      930      940      950      960      970      980      990
AGGTGTGGACAGTTCTGTGTTGAGGCTCTGCCAAGGCCTCAGAGCAGGCGGAGCTGCCTCGCTGCAGGCAGGTGGGGACCGGGGAA
TCCACACCTGTCAAGACACAAGCTCCGAGACGGGTCCGGAGTCTCGTCCGCTCGACGGAGCGAGTCCGTCCACCCCTGGGCGCCTT
  G V D S S V F E A L P K A S E Q A E L P R C R Q V G D R G K >
      _____TRANSLATION OF OAFHUMAN [A]_____>

     1000     1010     1020     1030     1040     1050     1060     1070     1080
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CGGGACGCAGACGGTGATACCGGACTCGGACCGGACCATGGGACGTACGAGTTATGACGGTGTGCGGCGTGGCGGGTGGCGGATGTT
  P C V C H Y G L S L A W Y P C M L K Y C H S R D R P T P Y K >
      _____TRANSLATION OF OAFHUMAN [A]_____>

     1090     1100     1110     1120     1130     1140     1150     1160     1170
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CACACCGTAGGCGTCGACGGTCTTCTCGATGTGGAAGCTGAAGATGCACGGGGTCTCCGTCGACACAGAGACCCCTACTCTAGGGATGGG
  C G I R S C Q K S Y S F D F Y V P Q R Q L C L W D E D P Y P >
      _____TRANSLATION OF OAFHUMAN [A]_____>

     1180     1190     1200     1210     1220     1230     1240     1250     1260
AGGCTAGGGTGGGAGCAACCTGGGCGGGTGGCTGCTCTGGGCCCACTGCTCTTACCAGCCACTAGAGGGGGTGGCAACCCCACTGAG
TCCGATCCCACTCGTTGGACCCGCCACCGACGAGACCGGGTGACGAGAAGTGGTCGGTGATCTCCCCACCGTTGGGGGTGGACTC
  G *

     1270     1280     1290     1300     1310     1320     1330     1340     1350
GCCTTATTTCCCTCCCTCCCACTCCCTGGCCCTAGAGCCTGGGCCCTCTGGCCCATCTCACATGACTGTGAAGGGGGTGTGGCATG
CGGAATAAAGGGAGGGAGGGGTGAGGGGACCGGGATCTCGGACCCGGGGAGACCGGGGTAGAGTGTACTGACACTTCCCCACACCGGTAC

```

Fig. 4B

1360	1370	1380	1390	1400	1410	1420	1430	1440
GCAGGGGGTCTCATGAAGGCCACCCCAATTCACACCTGTGCTCCTTGCGGGGACAGAGGGAGAGAAGGGCTCCCAGATCTACACCC								
CGTCCCCCAGAGTACTTCGTGGGGGTAAAGGTGGGACACGSAAGGAACGCCCGTCTCTCCCTCTCTCCCGAGGGGTCTAGATGTGGGG								
1450	1460	1470	1480	1490	1500	1510	1520	1530
TCCCTCCTGCATCTCCCTGGAGTGTTCATTGCAAGCTGCCAAAACATGATGGCCTCTGGTTGTTCTGTTGAACCTCCTGAACGTTTAG								
AGGGAGGACGTAGAGGGGACCCTACAAGTGAACGTTTCGACGTTTTGTACTACCGGAGACCAACAAGACAACCTTGAGGAACCTGCAAATC								
1540	1550	1560	1570	1580	1590	1600	1610	1620
ACCCTAAAAGGAGTCTATACCTGGACACCCACCTCCCCAGACACAACCTCCCTTCCCACATGCACACATCTGGAAGGAGCTGGCCCTCAGT								
TGGGATTTTCTCAGATATGGACCTGTGGGTGGAGGGGTCTGTGTTGAGGGAAGGGGTACGTGTGTAGACCTTCTCGACCGGGGAGTCA								
1630	1640	1650	1660	1670	1680	1690	1700	1710
CCCTTCTACTCCCCAACAAAGGGGCTCACTATCCCCAAAGAAGGAGCTGTGTTGGGACCCACGACGCAGCCCCCTGTACTGGATTACAGCAT								
GGGAAGGATGAGGGGTTGTCCCCAGTAGTAGGGGTTTCTTCTCGACAACCCCTGGGTGCTGCGTGGGGACATGACCTAATGTCTGTA								
1720	1730	1740	1750	1760	1770	1780	1790	1800
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TAGAGTAGAGACCGGGGCTCCGACGGACACCCCGCTCACCTCTGGAGGGTAGTGACTCTGTCTAGTGTCTGGTGCTCACGGAAGGGCC								
1810	1820	1830	1840	1850	1860	1870	1880	1890
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TGGACCTGCAACGGAGSTTTTGTCCGTGGTGCAGAAAGGGAGAGATCTGTCTTTATAAAAAATTCGAAGACCCGCTCCCTCCCTCGTAC								
1900	1910	1920	1930	1940	1950	1960	1970	1980
AAGTACGAGGAAAACTTGAATTCCAGATTTTTAATGCAAGTATTTATCATTTCTACCAGAAATAAACGTTTTAAGTTTTACTTGACTA								
TTCATGCTCCTTTTGAACCTAAGGTCTAAAAATTACGTTTCATAAATAGTAAAGATGGTCTTTATTTCGAAAATTCAAAATGAACTGAT								
1990	2000	2010	2020	2030	2040	2050	2060	2070
ATGAGACCCAGAGTTTGAGAAAAACTTTGGCCAATGCTGCCACCTGATGTGCAGAAAGTGTCCCCACACCTAGCAGTGGCCCTATCTTGG								
TACTCTGGGTCTCAAACCTCTTTTGAAAACCGGTTACGACGGTGGACTACAGTCTTTCACAGGGGTGTGGGATCGTCACCGGATAGAACC								
2080	2090	2100	2110	2120	2130	2140	2150	2160
AACAAGAACTCGAAAGCACCTACTGTGTGCTCAGCCATTTGAGGAAGGAAGGAGGAGAAGGAAGATGTTACTAGGGAAGGATGAGATAA								
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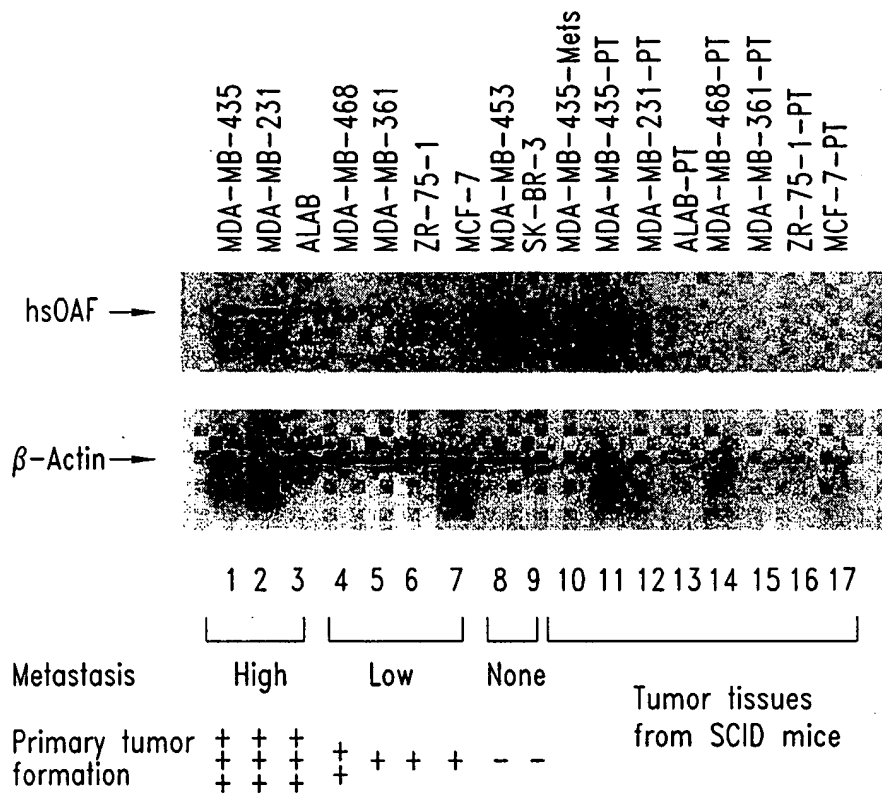
*Fig. 4C*

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      2170      2180      2190      2200      2210      2220      2230      2240      2250
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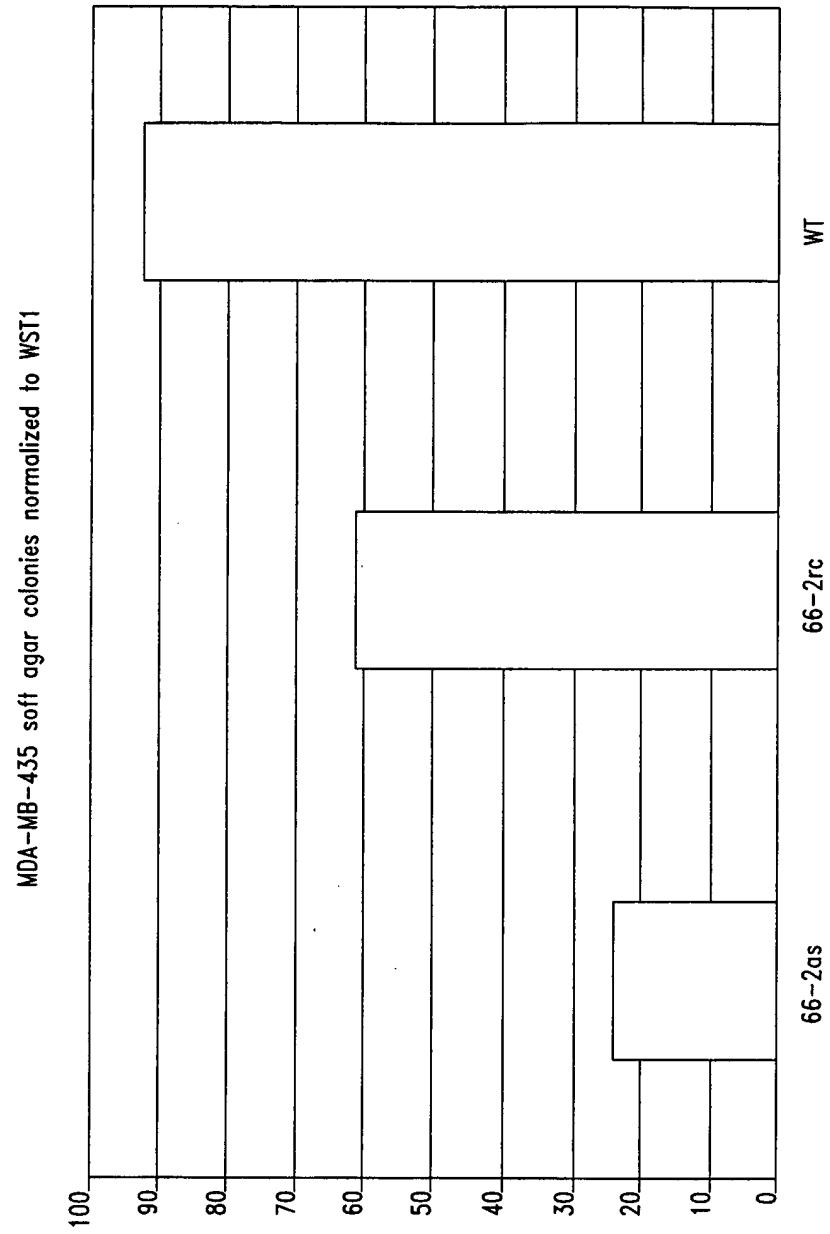
      2260      2270      2280      2290      2300      2310      2320      2330      2340
GAGATTGGAACCCCGCTTCAGATCTGGGCTCGGCTACTTACCTGCTGTGCAGCCATGGGTCAAGTTGCTTGACCTCTCTGTGCCTCCACT
CTCTAACCTTGGGGCGAAGTCTAGACCCGAGCCGATGAATGGACGACACGTCGGTACCCAGTTCAACGAACTGGAGAGACACGGAGGTGA

      2350      2360
CCCTTAGCTATAAAATGAGCTTACTT
GGGAATCGATATTTTACTCGAATGAA
```

*Fig. 4D*



*Fig. 5*



*Fig. 6*



F 1 MRPG-----VPLAR 10  
 1 MILKEEHPHOSIETAANAARQAQVRWRMAHLKALSRTRBAHGNCGRVSVKNHFFKHSR 60

F 11 PALLLLPLAPLLGTAPAELEVRVRLPDGQVTEESLQADSDASISLELRKPDGILVS 70  
 61 AFLWFLCNLMVADAFASQLINVCNGGEVQESTISNIGDLITLLEFQKTDGILIT 120

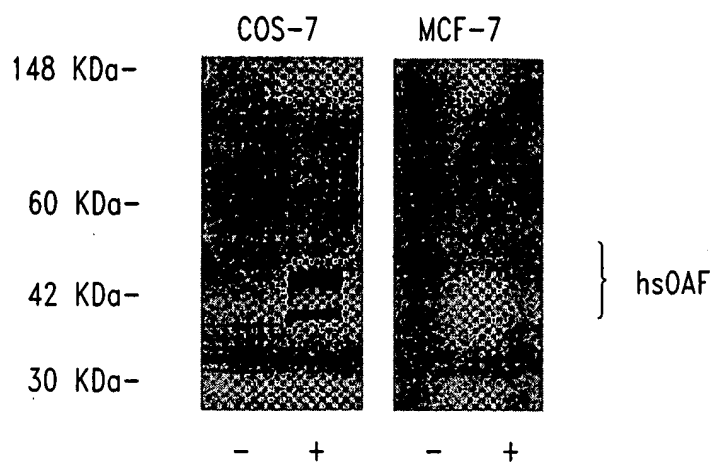
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 121 QVIDIRNEVQILKALVLGEEKRGQSQYQVMCFATKFNKGDIFSSAMAKLRQKNPHTIRT 180

F 131 AEEVRGLEHLMDVAVNFSQALLSPHLNVCAEAVDAIVTRQEDVRFMLEDGVDSSVF 189  
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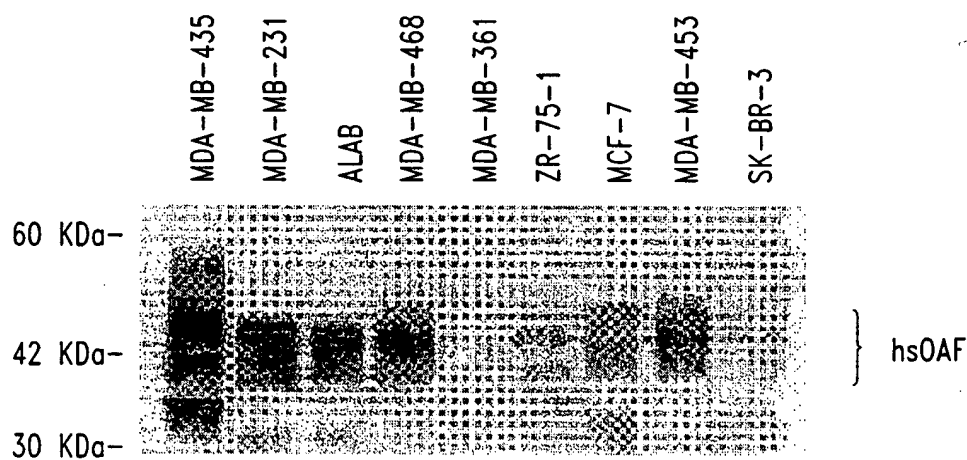
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 241 KATEKFPQTLSTRQNEVSSLWAPCLNLETICIGWVPGGLKVCKGKGVAGADSSGAQQQA 300

F 237 RPTVKGIRSCOKSYSFDFVVPQRLCLWDEDPYPG 273  
 301 OPTVRCGIKTRKQTOFTYVVRQKQCLWDE 332

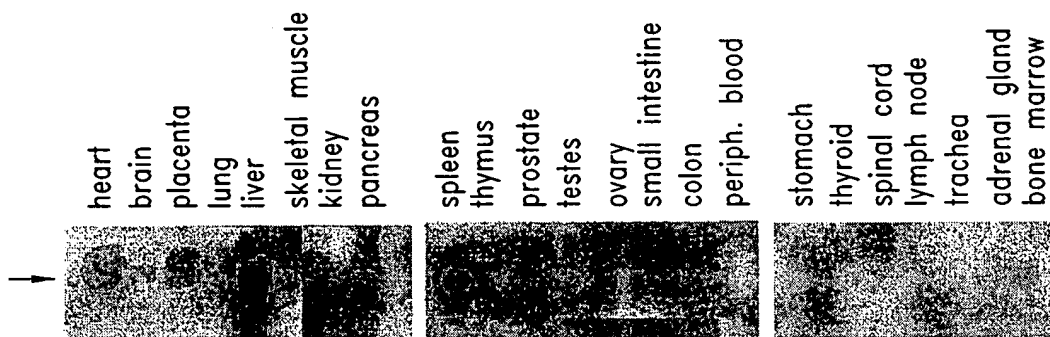
Fig. 7



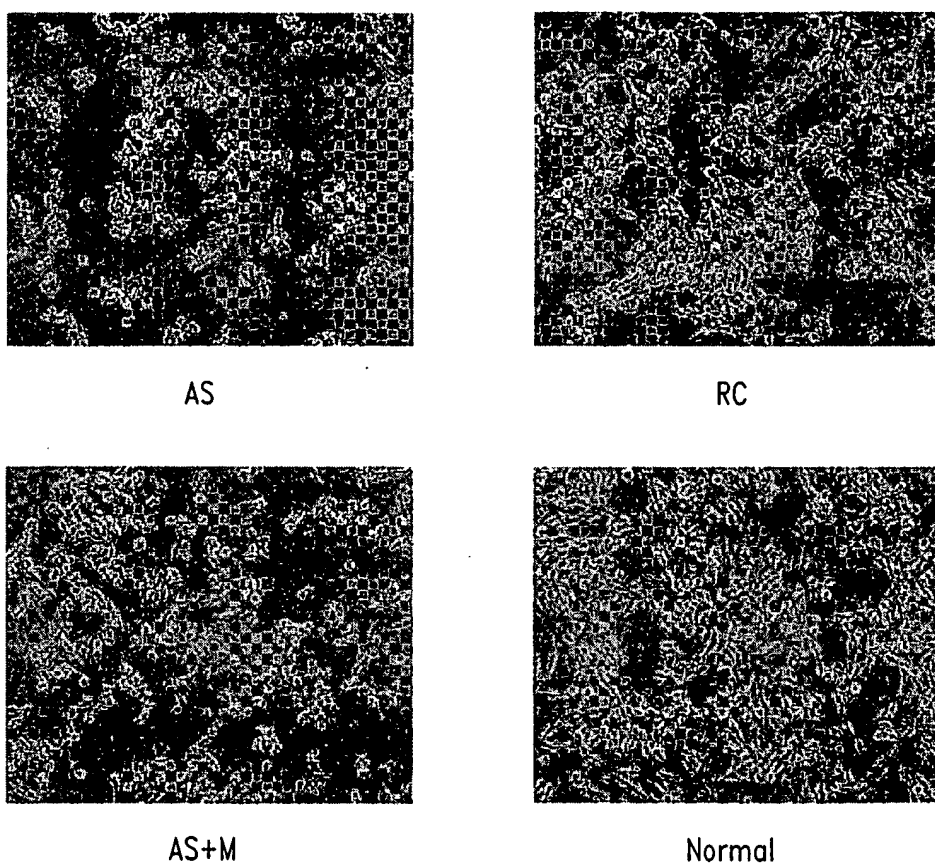
*Fig. 8A*



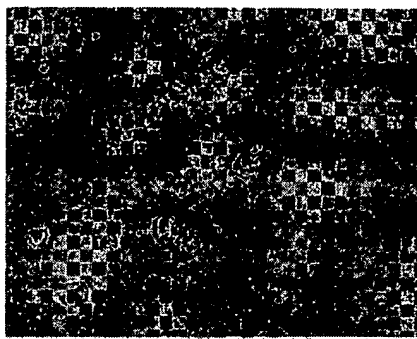
*Fig. 8B*



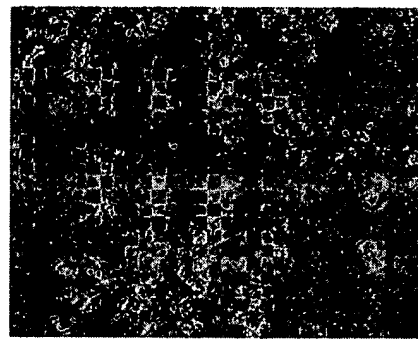
*Fig. 9*



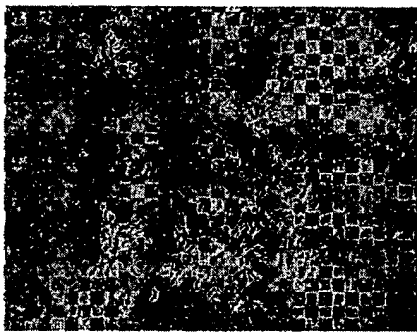
*Fig. 10A*



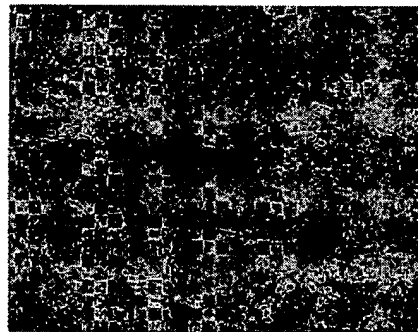
AS



RC



AS+M

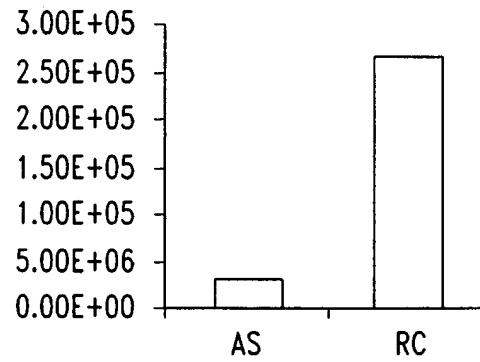


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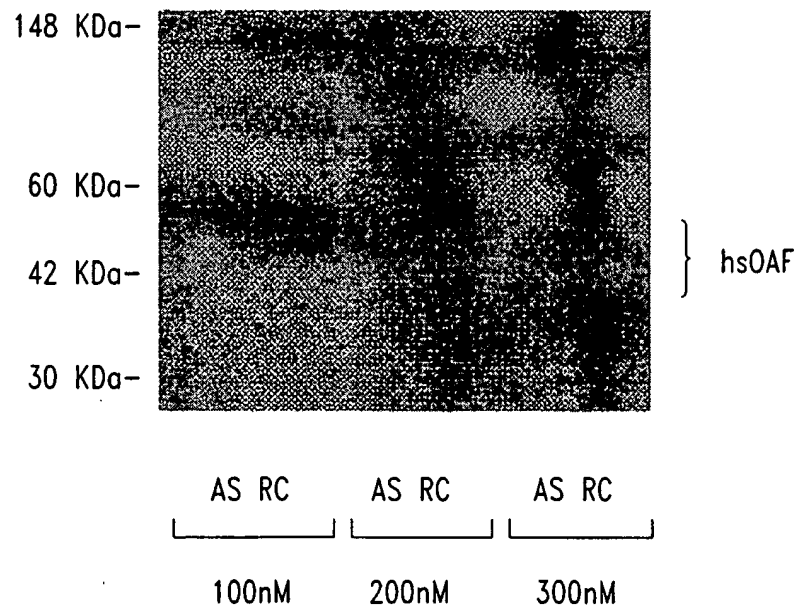
*Fig. 10B*

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179 GCTGAGCGCTACCCACGTGCGTCCGCGCCACCTCGCGGGCGACCCCGCGGCCAAGGCCCCGGGCGGAGCGGCTCCGGGGCGCCCGGA  
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1  
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2 R L P G V P L A R P A L L L G L P L L A P L L G T G A P A E  
449 CTGCGGCTCCGCGTGGCGTGC CGGACCGGACCGGTGACCGAGGAGAGCCTGCAGGCGGACAGCGACGCGGACAGCATCAGCCTCGAGCTG  
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539 CGCAAGGCCGACGGCACCTCGTCTCTTCACCGCGCAGCTTCAAGAAGGATGTGAAGGTCTTCCGGGCCCTGATCCTGGGGAGCTGGAG  
62 R K P D G T L V S F T A D F K K D V K V F R A L I L G E L E  
629 AAGGGGACAGTCA GTTCCAGGCCCTCTGCTTTGTGTCACCCAGCTGCAGCAATAGATCATCCCAAGTGAAGGCCATGGCCAAAGCTCCGG  
92 K G Q S Q F Q A L C F V T Q L Q H N E I I P S E A M A K L R  
719 CAGAAAAATCCCGGGCAGTGC CGGACGGCGGAGGAGTTCGGGGTCTGGAGCATCTGCATCGATGTGCTGTCAACTTCAGCCAGGGG  
122 Q K N P R A V R Q A E E V R G L E H L H M D V A V N F S Q G  
809 GCCCTGCTGAGCCCCATCTCCACAAGGTGTGTGCGCGAGGCGGTGATGCCATTCACCGCCGACGAGGATGTCCGGTCTGCGTGGAG  
152 A L L S P H L H N V C A E A V D A I Y T R Q E D V R F W L E  
899 CAAGGTGTGGACAGTCTGTGTTGAGGGCTCTGCCAAGGCCCTCAGAGCAGGCGGAGCTGCCTCGCTGCAGGCAGGTGGGGGACCGCGGG  
182 Q G V D S S V F E A L P K A S E Q A E L P R C R Q V G D R G  
989 AAGCCCTGCGTTCGCCATATGGCTGAGCCTGGCCTGGTACCCCTGCATGCTCAAGTACTGCCACAGCCGACCGGCCACGCCCTAC  
212 K P C V C H Y G L S L A W Y P C M L K Y C H S R D R P T P Y  
1079 AAGTGTGGCATCCGAGCTGCCAGAGAGCATACAGTCTCGACTGTACGTGCCCAAGGACAGCTGTGTCTCGGAGTGAAGATCCCTAC  
242 K C G I R S C Q K S Y S F D F Y V P Q R Q L C L L W D E D P Y  
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272 p g \*  
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*Fig. 11*



*Fig. 12A*



*Fig. 12B*